

The 154<sup>th</sup> meeting of the State Expert Appraisal Committee (SEAC) was held on 10<sup>th</sup> November, 2014 under the Chairmanship of Dr. R. B. Lal. The following members attended the meeting-

1. Dr. Mohini Saxena, Member
2. Shri K.P. Nyati, Member
3. Shri A.P. Srivastava, Member
4. Dr. U.R. Singh, Member
5. Dr. Srinivasan Krishnan Iyer, Member
6. Shri Manoj Pradhan, Member
7. Shri Manohar K. Joshi, Member
8. Dr. Alok Mittal, Member
9. Shri A.A. Mishra, Secretary

The Chairman welcomed all the members of the Committee and thereafter agenda items were taken up for deliberations.

**Discussion and decision taken on miscellaneous issues:**

**Confirmation of the minutes of 153<sup>rd</sup> meeting dated 21<sup>st</sup> October 2014-** Minutes of the 15<sup>th</sup> SEAC Meeting dated 27/10/2014 were discussed, and finalized in the meeting.

**1. Case No. - 1068/2013- Shri Jitendra Kumar Kushwaha , Adarsh Nagar Colony, Post office- Katni, District Katni (M.P) Bhatura Lime stone mine at Khasra no.39/2, 39/3,39/4,39/5, Village -Bhatura Tehsil- Maihar Distt-Satna (M.P) Lease area -16.288 ha. Env. Cons. -GRC INDIA (PVT) Noida (U.P) - ToR issued vide letter No. 650 Dt. 20/10/13. For- EIA Presentation.**

This is a mining project in a mining lease area of 16.288 Ha. Mining of limestone is proposed in the project. TOR to carry out EIA and prepare EMP was issued to the PP by SEAC vide letter dated 20/10/2013. The EIA report was forwarded by SEIAA to SEAC for appraisal and necessary recommendation. The salient features of the EIA report and the EMP were presented by the PP accompanied by his consultant. After deliberations PP was asked to submit response with supporting documents for the following queries:

- Production figures from 1993 onwards duly authenticated by the concerned authority of mining department.
- The water analyses report has to be reviewed in view of the pointed discrepancies.
- Calculation of the area considering all the land-uses in MLA along with a lay-out (conceptual plan).
- Impact of de-watering / storage of mine water on the ground-water regime of the region to be carried out and reported.
- Clarification on the Public Hearing issue raised in the news paper cutting with supporting documents.
- An undertaking stating following: (a) Back-filling shall be necessarily taken up by the end of 5<sup>th</sup> year. (b) A buffer of 50 meters shall be created in form of lush green curtain along the boundary falling towards the main road. (c) No deep-hole blasting shall be carried out in the project.
- Calculation of the quantum of waste generation vis-à-vis back-filling.
- A specific note on cumulative environment impact assessment considering the other mines in the vicinity.

[R.B. Lal, Chairman]

[A.P. Srivastava, Member]

[K.P. Nyati, Member]

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[Dr. Manoj Pradhan]

[Manohar K. Joshi, Member]

[A.A. Mishra, Secretary]

**2. Case No. - 1830/2014** Mr. R.P. Dubey, Executive Engineer-07, Bhopal Development Authority, Pragati Bhawan , Press Complex, MP Nagar, Zone-1-462011 - Construction of Residential Area Development, commercial, public & semipublic development scheme Aerocity Phase-1 at Village- Pipalner, Gondermau, Bisankhedi & Badwai, Tehsil- Huzur, District- Bhopal.at area-217.649 Ha. **Env. Consultant – SAWEN, Lucknow. For – Building Construction.- TOR**

This is a township development project of Bhopal Development Authority comprising a plot area of 216.649 ha,. The project falls under category B and mentioned as item no. 8 (b) in the schedule of EIA Notification. It, therefore, requires prior EC from the MPSEIAA. The application for the same was forwarded by the SEIAA to SEAC for scoping so as to determine TOR to carry out EIA and prepare EMP. The salient features of the project and proposed TOR were presented before the committee by the PP accompanied by his consultant, which revealed following:

**Project details:**

Area	AREA IN HECTARE	PERCENTAGE
Total area	217.649	
Area under master plan road	22.171	
Agriculture land use	1.838	
Net scheme area	193.64	
Residential land use	162.373	83.85
Comercial land use	12.958	6.69
Public & semi public land use	18.309	9.46

No. of Floors	:	B+G+10
Total Green Area	:	20.119 Hac/ 201190 sqm (10.38%)
Green Belt Area	:	3000 sqm
Total Road Area	:	50.36 Hac/ 503600 sqm
Electrical Load Requirement	:	31000 KW
Total Dwelling Units	:	6952 nos.
Total Population	:	45200 personnelø
Total Consumption of Water	:	3369.45 KLD
Proposed Capacity of STPø	:	08 Nos. x 500 KLD
No. of rainwater harvesting pits	:	143 Nos.
Project Duration	:	24 Months
Total Project Cost	:	653.0 Crores

**Break up of land use**

		Residenti al - 162.373 Ha.	%	Commerc ial - 12.958 Ha.	%	PSP - 18.309 Ha	%	Total	%
1	Plotable	71.96	<b>44.31</b>	7.452	<b>58.50</b>	13.773	<b>75.22</b>	93.185	<b>48.12</b>
2	Roads	43.49	<b>26.81</b>	4.226	<b>31.63</b>	2.644	<b>14.45</b>	50.36	<b>26.01</b>
3	Open/gr een	16.947	<b>10.43</b>	1.28	<b>9.87</b>	1.892	<b>10.33</b>	20.119	<b>10.39</b>

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	parks								
4	Open service	2.033	1.25					2.033	1.05
5	Plot under mix land use	17.85	10.99					17.85	9.22
6	Amenities	7.313	4.50					7.313	3.78
7	Group housing	2.78	1.71					2.78	1.44

**Water Requirement**

Sl. No.	Water Use	Population	Per Capita in (LPCD)	Total Water Requirement (KLD)	Waste Water Discharge (KLD)
1	Residence	34760	86	2989.36	
2	Visitors	10420	15	156.3	
3	Facilities Staff (Schools, Health Centre, Nursing Homes, Milk Booth)	20	45	0.9	
Total Domestic Water Requirement		45200		3146.56	2517.24
5	School Laboratories	-	Lumpsum	5.00	4.8
6	Gardening	201190 sq.m.	1.0 l/m <sup>2</sup>	201.0	
7	Roadside Plantation	3000 sqm (600 m x 5 m)	28150 litre/Km /Day	16.89	
<b>TOTAL WATER REQUIREMENT KLD</b>				<b>3369.45</b>	<b>2522.048 KLD</b>

After deliberations following additional **TORs'** were issued by the committee:

- The site is in proximity of the Bhopal Air Port hence NOC from Air port authority has to be obtained; a copy application made to the Bhopal Air Port Authority in this context has to be furnished.
- Green areas and play spaces in the project have to be enhanced. Accordingly, the lay out to be furnished with EIA.
- Drainage plan for the waste-water generated from the project to be submitted.
- Detailed plan regarding conservation of the natural nalla passing from the project site has to be furnished with EIA.
- Impacts on the Halali river water to be studied.
- Fire-fighting management plan for the complete project has to be prepared and furnished in the EIA report.
- Detailed EMP for construction phase and for operational phase with budgetary provisions and modus operandi of the EMP to be submitted.

**3. Case No. - 1829/2014 Shri S.K. Mishra, Executive Engineer, Pragati Bhawan, Press Complex, M.P. Nagar, Zone-1, Bhopal, (M.P) – 462011- Construction of "Residential Area Development under the scheme of Sardar Ballabh Bhai Patel Aawasiya Yojna MISROD Phase II, At**

[R.B. Lal, Chairman]

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*Village- Bawadia Kalan and Salliya Village, Tehsil- Huzur , Distt.- Bhoapl. (M.P) Total Plot Area- 230.27 Acres (931890 sqm ) and excluding the canal of 10.60 acres (42899.1 sqm), the net planning area is 219.67 acres (888991.4 sqm) and **Built up area of 4,76,801.04 m<sup>2</sup> (53.64%), Env. Consultant – Vitya Consultancy, Hyderabad. For Building Construction.- TOR.***

This is a township development project of Bhopal Development Authority comprising a plot area of 230.27 Acres, the project falls under category B and mentioned as item no. 8 (b) in the schedule of EIA Notification. Therefore it requires prior EC from the MPSEIAA. The application for the same was forwarded by the SEIAA to SEAC for scoping so as to determine TOR to carry out EIA and prepare EMP. The salient features of the project and proposed TOR were presented before the committee by the PP accompanied by his consultant. After deliberations following additional **TORs**’ were issued by the committee:

- Details of the existing village roads and their connectivity with the proposed road net-work to be furnished with the EIA report.
- STP to be detailed out for existing as well as future planning of the BDA in adjacent land.
- Water balance for the entire project to be furnished.
- Green areas and play spaces in the project have to be enhanced accordingly the lay out to be furnished with EIA.
- Drainage plan for the waste-water generated from the project to be submitted.
- Fire-fighting management plan for the complete project has to be prepared and furnished in the EIA report.
- Detailed EMP for construction phase and for operational phase with budgetary provisions and modus operandi of the EMP to be submitted.

**4. Case No. - 1827/2014 M/s C I Builders Pvt. Limited, Shri Varun Malik, Partners, 182, Zone-1, M.P. Nagar, Bhopal, (M.P.)- 462011. Multi Unit Residential Project CI Gate at at Khasra No.- 89/1/1, 89/1/2 MP. Village- Kankariya, Tehsil- Huzur, Distt. – Bhopal, Total Land Area - 7.68 Ha., Total Built-Up Area -147610 sqmt. Env. Consultant – CES Bhopal. For – Building Construction.**

This is a township development project comprising a plot area of 7.68 Ha and total built-up area of Total Built-Up Area -147610 sqmt. The project falls under category B and mentioned as item no. 8 (b) in the schedule of EIA Notification. Therefore it requires prior EC from the MPSEIAA. The application for the same was forwarded by the SEIAA to SEAC for appraisal and necessary recommendation. The salient features of the project and EMP were presented before the committee by the PP accompanied by his consultant. The submissions and the presentation revealed following aspects of the project:

**Project details**

Project Requirement	Details
Location	Khasara No. : 89/1/1, 89/1/2 , Village Kankariya, Tehsil- Huzur, Bhopal (MP)
Nearest Railway Station	Habibganj ó 12km
Nearest Airport	Bhopal -28
Plot Area	7.68 ha

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Proposed Built-up Area	147610 Sq mt
Landscaped Green Area	9732 Sq mt (about 12.6%)
Dwelling Units	1200 Multiunit and LIG- 72 & EWS- 108
Total Population	6900
Total Water requirement	934 KLD
Solid waste generated	774 Kg / day
No. of Parking proposed	30749 sq mt for 1254 number
Total Power requirement	5000 KW
Height	30 mt

**Details of Approvals Obtained / Applied For**

- T & CP Approval- 890/LP-33/16/NAGRANI/JIKA/2013-14 , dt 16.05.2014
- Colonizer License has been granted vide no. 62/B-121/2013-14 dated 02.09.2014 in the name of PGH International (p) Ltd. (MP).
- NOC from water supply , excess treated water disposal and solid waste disposal from municipal corporation vide number 363 dated 30.08.2014

**Statement of area**

Statement of Areas		Development	
SN	Particular	Permissible	Proposed
1	Organized Open Area	6430.87 sq mt	6430.87 sq mt
2	Services Area	643.08 sq mt	643.08 sq mt
3	Maximum Far	1:25	1:25
4	Road & Circulation Area	NA	NA
5	Maximum Ground Coverage	30%	30%
6	M O S	12/6/6/6	12/6/6/6
7	Maximum Height	30 mt	30 mt
8	Total Area of land	76800 sq mt	64308.70 for resi + comme.
9	Total Built up area including built-up area as per T & CP norms or MPBVR 2012	96439.13 sq mt 6070 sq mt	96439.13 sq mt 6070 sq mt
10	Total Built up area including built-up area of stair cases, balcony, basements and other services area which does not considered for calculation wrt T & CP & MPBVR 2012	-	1,47,610 sq mt

Building	Area in Sq mt	Ground Coverage Area Sq Mt
Residential Area	1,08,650	94029
Commercial	2790	2410

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Total	1,11,440	96,439	
<b>Details of Parking Statement</b>			
Type of Parking	Parking spaces required as per norms of MPBVR 2012 (sqm)	Parking spaces provided in (sqm)	Number of Vehicles provided as per norms of MPBVR 2012
Basement	35	1750	50
Stilt	30	28339	944
Open	25	660	260
Others	-	-	-
Total			1254
Vehicle required as per norms are 990			

**Source of water supply**

1. In construction phase we will take water supply form the private tanker suppliers.
2. The Main source of water supply in operation phase will be corporation water supply. It will cater the domestic requirement whereas additional water requirement will be fulfilled by treated water from STP.

**Water balance**

Total Water Requirement = 934 KLD  
 Total Waste Water generation = 840 KLD  
 Total flushing Water Requirement = 312 KLD  
 Net Fresh domestic water requirement = 622 KLD  
 Water used for land scape = 15 KLD  
 Excess treated water available = 840-312-15 = 513 KLD  
 Excess treated water will be used for the land application, discharge into proposed net work of area

**Environment Management Plan**

**STP Details**

- One STPs is proposed which will have capacity of 1000 KLD
- It is based on aerobic suspended growth process and used in the secondary treatment effluent/sewage treatment plant

**Rain water harvesting**

It is reported that rain water harvest pit of suitable size shall be constructed. The rain harvest pit consists of 09 nos. of 300mm dia borehole for 12 M deep, from the invert level of percolation pit.  
 After completion of the project and rainwater harvesting structures, it is envisaged that the total ground water recharge would be about 58000 m<sup>3</sup>/annum.

**Solid waste management**

It is estimated that at about 3810 kg per day of waste will be generated from the facility during the operation

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S. no	Likely impact	Management/ mitigation measures
A) during construction phase		
1 2.	Solid waste of the type waste bricks, concrete, MS rods, tiles, wood etc. Is expected to be generated periodically. Soil will be excavated periodically from earth work in phased manner.	<ol style="list-style-type: none"> <li>1. Construction yards are proposed for storage of construction materials.</li> <li>2. Construction work generated solid waste is proposed to be collected and disposed off through vendors.</li> <li>3. Excavated top soil will be stored in temporary constructed soil bank and will be reused for landscaping of the proposed group housing project.</li> <li>4. Remaining soil shall be utilized for refilling / road work / raising of site level at locations / selling to outside vendors for construction of roads etc.</li> <li>5. There shall be "Refuse Containers" at site for the management of domestic waste generated by the construction laborers and these containers shall be emptied at least once daily.</li> </ol>

#	Description of Modules	Treatment & Disposal of Total Solid Waste
1	General Garbage/Sludge/	<ol style="list-style-type: none"> <li>1. There shall be segregation at source</li> <li>2. All waste including sludge from STP will be disposed off at trenching ground of corporation.</li> </ol>

**Air:** The major source of air pollution in the proposed Project will be vehicular movement and DG sets ( 1X125 KVA)

- To combat air pollution (SPM, SO<sub>2</sub> and NO<sub>x</sub>), development of green belt has been proposed.
- Due to circular pattern of road development, concentration of vehicles & vehicular emissions at a particular point would be lesser.
- DG sets having adequate stack height will be provided as per CPCB guidelines.
- Water spraying at internal road of colony is proposed
- Use of ultra low Sulphur diesel with adequate stack height.

**Noise level**

- " DG set rooms shall be made sound proof.
- " Regular preventive maintenance of machinery.
- " Provision of green areas and broad leafed tree plantation.
- " Use of less horn will be promoted.
- " Development of silence zones for traffic movement.

**Energy conservation measures**

1. Green CFL/LED based lighting will be done in the common areas, landscape areas, signages, entry gates and boundary walls etc.
2. Roof, walls & fenestration products (sash and frame) shall comply either the maximum U-Factor or minimum Insulation R- Values.
3. DG sets shall be on auto cut and auto start controlled mechanism.
4. Variable Frequency Drives (VFD) have been proposed for the Pumps and Blowers.

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5. It is proposed to use Cellular Light Weight Concrete (CLC), which uses fly ash for manufacturing.
6. All the roofs are proposed to be insulated to minimize heat gain with 50 mm expanded polystyrene or equivalent insulation.
7. Efficient plumbing equipments will further help reduce energy consumption.

**Fire & safety measures**

- Fire hydrants shall be provided all around the buildings.
- Walls enclosing lift shafts shall be fire resistant for 4 hour.
- Landing doors and lift car doors will be fire/ smoke resistant.
- Electrical meter room shall be on the ground floor and it will be adequately ventilated. It will also have a fire resistant door.
- The lighting of the escape route will be on independent circuit with power backup.
- Fire fighting and fire alarm provided in the building.
- Static Tank- underground and overhead tank for fire.
- Landing valves with hose reels within the complex.
- External hydrant all around the building & yard .
- Automatic sprinkle system provided in building (1 sprinkler/12 m2)
- Pumping arrangement system- Riser system with pressure pump, auto operation with pressure switch.
- Staircases/lifts pressurization/ smoke extraction system

After deliberations committee found the submissions and the presentation satisfactory and acceptable hence it was decided to recommend the case for grant of prior EC subject to the following special conditions:

1. Fresh water requirement for the project shall not exceed 622 KLD.
2. No ground water use shall be made as proposed.
3. Prior EC is valid for the maximum built-up area of 147610 m<sup>2</sup> in a plot area of 7.68 Ha for any enhancement in the above fresh EC shall be obtained.
4. Use of Photovoltaic cells (Solar energy) in common areas to be taken up.
5. Press-filter dried STP sludge and the MSW shall not be stored at site for more than 48 hours.
6. Appropriate play spaces shall be developed in the project.
7. At least 15% of the total plot area shall be developed as Green area with local plant species.

**5. Case No.-1834/2014 Shri Sudhir Bhandari Mansarovar Complex, Block-C, FF-11, Near Habibganj Railway Station, Bhopal-462016(M.P.)\_Proposed Residential Project Rishi South City at Khasra No. 262/1, Village - Misrod, Tehsil- Huzur, Distt. - Bhopal (M.P) Total Land Area - 20630 sqmt.(2.063 ha.) Total Built up area - 39550.96 sqmt. Env. Consultant – In- Situ Enviro Care, Bhopal. For – Building Construction.**

This is a township development project comprising a plot area of 2.068 Ha and total built-up area of -39550.96 sqmt. The project falls under category B and mentioned as item no. 8 (b) in the schedule of EIA Notification. It, therefore, requires prior EC from the MPSEIAA. The application for the same was forwarded by the SEIAA to SEAC for appraisal and necessary recommendation. The salient features of the project and EMP were presented before the committee by the PP accompanied by his consultant. After deliberations PP was asked to submit response to the following queries:

[R.B. Lal, Chairman]

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[K.P. Nyati, Member]

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- It is proposed that the treated waste water from the project shall be disposed off into nearby surface water body; accordingly, the sewage treatment plant (STP) has to be planned such that the quality of treated waste water meet the river water standards. PP is required to submit a proposal in this regard with full details of the STP.
- The capacity of the STP has to be re-evaluated considering the quantum of sewage expected to generate from the project when fully operational.
- An undertaking has to be furnished stating: (a) A buffer of 09 meters between the boundary-wall of the project and the HFL of the nearby nallah shall developed & maintained as green, this area shall be developed aesthetically. (b) Quality of the treated waste-water shall be tested regularly and the same shall meet the river water standards at any point of time. (c) Ground water shall not be used for construction purpose under any circumstances.
- Location of the STP and MSW storage area has to be reviewed and re-located at suitable place, away from the nallah.
- Parking space for all 587 flats has to be provided with spare parking for visitors to avoid parking of vehicles on roads.
- Plantation scheme including the plantation in the buffer zone has to be submitted with a lay-out plan.

**6. Case No.-1842/2014 - M/s PGH International Pvt Ltd. Through Shri S.N. Vijayvargiya Director, Peoples Campus, Bhanpur, Bhopal (MP) Residential Project People Highrise of PGH International Pvt. Ltd. at Village - Raslakhedi, Bhanpur, Tehsil- Huzur, Distt.- Bhopal, Total Land Area - 6.5930 ha. Total Built up Area -148897.46 sqmt. at Khasra No. - 19/1, 19/2, 20/1, 67/1(part) & 67/2 (part) Env. Consultant – CES Bhopal. For – Building Construction.**

This is a building construction project comprising total plot area of 6.5930 ha and total built-up area of 148897.46 sq mt for residential purposes. The project falls under category 8 (a) of the Schedule of EIA Notification, hence requires prior EC before commencement of any activity on site. The case was presented before the committee by the PP and his consultant. The submissions and the presentation revealed following aspects of the project:

The salient features of the project include: Affordable multi stores, school, green area, and Apartments for Economic Weaker Section.

**Project details**

Location	Khasara No. : 19/1,19/2,20/1,67/1(part) and 67/2 (part) Raslakhedi , Bhopal (MP)
Unit	Residential Building (Multi) : 1620 flats LIG + EWS : 220
Plot Area	Total Land Area = 6.5930 ha
Proposed Built-up Area	148897.46 sq mt
Landscaped Green Area	6704.32sq mt
Dwelling Units	Residential Building : Total Number of Flats : 1620 + 220

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Total Water requirement	1240 KLD
Fresh water Requirement	824 KLD
Total waste Water generation	1120 KLD
Solid waste generated	5075 KG
Parking details	Total open Parking area : 17895.26 ó Stilt and 15925.00 open for 596 and 637 number of ECS
Distance of fire station	08 KM at BHEL area and having own fire tender
Height of Building	30 mt
Internal ROW	Front -12 mt, Side & rear - 7.5 mt
DG Sets	1X100 KVA

**Details of approvals obtained / applied for**

- T & CP Approval- 744/LP-198/29/NAGRANI/JIKA/2013 , dt 05.04.2014
- Colonizer License has been granted vide no. 276 dated 22.04.2010 in the name of PGH International (p) Ltd. (MP).
- NOC from water supply from corporation and solid waste disposal from municipal corporation 25.09.2014

**Statement of area**

AREA CALCULATIONS			
1	Total Land Area		65930
2	Plot Reserved For Primary School		4004
3	Net Residential Area		61926
4	Ground Coverage		18577.73
5	Open Area & Services Area		8822.65
6	Total Built-Up Area		148897.46
7	Total Parking Area		17895.26

**SOURCE OF WATER SUPPLY**

1. In construction phase we will take water supply form the private tanker suppliers and treated water from existing STP of mall .
2. The Main source of water supply in operation phase will be corporation water supply. It will cater the domestic requirement whereas additional water requirement will be fulfilled by treated water from STP.

**Water Balance**

[R.B. Lal, Chairman]

[A.P. Srivastava, Member]

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Total Water Requirement = 1096 +114 = 1240 KLD  
Total Waste Water generation = 986+134 = 1120 KLD  
Total Flushing Water Requirement = 336+50 = 386 KLD  
Net Fresh domestic water requirement = 730+94 = 824 KLD  
Excess treated water available = 570+ 40 = 610 KLD  
Excess treated water will be used for the further construction purposes, land application, discharge into nalla

## **ENVIRONMENT MANAGEMENT PLAN**

### **STP Details**

Considering the topography and details of the project, two SAFF based STPs are proposed which will have capacity of 150+1100 KLD.

### **Storm water management & rain water harvesting**

- “ Separate and independent rain water drainage system shall be provided for collecting rain water from terrace, paved area, lawns and roads. Independent rain water down takes of appropriate size and number shall be provided in close coordination with architect.
- “ Perforated pipe drainage system shall be provided for open-to-sky courtyard/lawn. The storm water runoff from the ramp shall be separately collected and connected to sump.
- “ No storm water ingress shall be allowed into stilt portion. It shall be ensured to have electrical supply for all sump pump panel from electrical panel.
- “ Emergency supply shall also be made available to the sump pump electrical panel. It is also proposed to provide standby diesel engine pump for storm water drainage in inventory in case of extreme emergency.
- “ Provision of slit traps in storm water drains and regular inspection and cleaning of storm drains.

### **Solid waste management**

It is estimated that at about 5075 kg per day of waste will be generated from the facility during the operation

#### **Construction debris**

- Recycled aggregate will be used for filler application, and as a sub base for road construction. Mixed debris with high gypsum, plaster, shall not be used as fill, as they are highly susceptible to contamination, and will be given to recyclers.
- Construction contractors shall remove metal scrap from structural steel, piping, concrete reinforcement and sheet metal work from the site. A significant portion of wood scrap can be reused on site. Recyclable wastes such as plastics, glass fiber insulation, roofing etc shall be sold to recyclers.

#### **Operation phase**

##### **Collection and transportation**

- During the collection stage, the biodegradable and non- recyclable/ non biodegradable waste will be stored and collected separately. There will be two separate MSW collection centre i.e. each for multi unit segment and LIG/EWS segment. Coloured collection bins shall be provided in proper numbers
- To minimize littering and odours, waste will be stored in well designed containers/bins that will be located at strategic locations to minimize disturbance in traffic flow.
- The collection vehicles will be well maintained to minimize noise and emissions, and while transporting waste, these will be covered to avoid littering.

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[Dr. Mohini Saxena, Member]

[Dr. Manoj Pradhan]

[Manohar K. Joshi, Member]

[A.A. Mishra, Secretary]

**Disposal**

- With regard to the disposal/treatment of waste, the facility will disposed off the waste and STP sludge at trenching ground of Bhopal Municipal Corporation.

**Environmental Management Plan-**

**Air environment**

**Construction Phase**

- Transportation of Raw material during Non peak hours
- Idling of delivery trucks should not be permitted on roads
- Use of ready mix concrete carried in enclosed container
- Dust covers on trucks used for transportation of material
- Equipment shall be located away from sensitive receptor location
- Frequent water sprinkling to prevent fugitive dust emission
- Use of sharp teeth excavation machinery
- Covered fencing around the site will be provided.

**Operational Phase**

- DG set will have appropriate stack height as prescribed by the Central Pollution Control Board
- Proper ventilation will be provided to all parts of the building
- Open burning of any waste shall not be allowed.
- Green belt area shall 6704.32 sq mt area.

**Noise**

**Construction PHASE**

- Time of operation - Noisy construction equipment should be permitted with suitable precautions.
- Job rotation and hearing protection ó Workers employed in high noise areas will be rotated. Earplugs / muffs or other hearing protective wear will be provided to those working very close to the noise generating machinery.

**Operation phase**

- Noise Emission Control Technologies: DG generator will have suitable acoustic enclosure which shall be designed for minimum 65 dB (A).
- Ambient Noise Monitoring shall be carried out as per direction of MPPCB

**Energy conservation measures**

**Electrical**

- Energy efficient CFL/T5 lamps for common areas. Use of low loss electronic ballasts
- Multiple circuit for lighting to switch off unwanted lights
- Use of low loss capacitors, APFC relays
- Group control for elevators
- Proper selection & sizing of cables consideration derating factors so as to minimize losses
- High efficiency motors conforming to IS 2615-2004
- Use of LED lightings which consume less energy
- Use of day light which reduce 50-60% of lighting cost
- Use of insulated glass can save 10-13% of cooling and heating cost

**Plumbing**

- Variable speed pumping system will be adopted for water distribution
- All public wash basins and urinals will have proximity sensors
- Recycle programme consider for water ( refer water balancing chart )

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[A.A. Mishra, Secretary]

**Fire & safety measures**

- Overhead Fire storage tanks as per NBC 2005
- Fire Hydrant System
- Automatic Fire Alarm System
- Hydrant pumps, Sprinkler pumps & Jockey pumps.
- Hand Held Fire Extinguishers
- Automatic Sprinklers System
- Wet risers, Fire Extinguishers, Hose Reel.

After deliberations committee found the submissions and the presentation satisfactory and acceptable hence it was decided to recommend the case for grant of prior EC subject to the following special conditions:

1. Fresh water requirement for the project shall not exceed 824 KLD.
2. No ground water use shall be made as proposed.
3. Prior EC is valid for the maximum built-up area of 148897.46m<sup>2</sup> in a plot area of 6.59 Ha for any enhancement in the above fresh EC shall be obtained.
4. Use of Photovoltaic cells (Solar energy) in common areas to be taken up.
5. Press-filter dried STP sludge and the MSW shall not be stored at site for more than 48 hours.
6. Appropriate play spaces shall be developed in the project.
7. At least 15% of the total plot area shall be developed as Green area with local plant species.

**7. Case No.-1879/2014 - Shri Ajit Samadariya, Director, Samdariya Builders Pvt. Ltd., Samdariya Inn, Rasel Chowk, Jabalpur, MP-482001 - Proposed Residential & Commercial Project "Samdariya Gold" at Khasra No. – Part of 480 and 481, Village - Rewa, Opp. Balbharti School, Total Land Area – 1.6782 Ha., Total Built Up Area- 58840.47 sqm. Env. Consultant – CES, Bhopal.**

It is a Residential Cum Commercial Project (Under Re-densification Scheme Of Govt Of MP) At Khasara No. : Part of 480 and 481 Opposite Bal Bharati School, Tehsil- Huzur, Dist ó Rewa (MP)

Total Land Area = 1.6782 ha and Total Built Up Area = 58840.47 sqm for residential cum commercial project. The project falls under category 8 (a) of the Schedule of EIA Notification, hence requires prior EC before commencement of any activity on site. The case was presented before the committee by the PP and his consultant. The submissions and the presentation revealed following aspects of the project:

- The Land has been allotted to M/s. Samdariya Builders Pvt. Ltd. by the Government of M. P. under Re-densification scheme. The applicant is registered as a builder and colonizer in Municipal Corporation Rewa.
- The salient features of the project include Residential Units (104 Nos.) ,Commercial (shops) (450 No) , Food court (01), Multiplex (01), Hotel (with 16 rooms)

**Project details**

Facility With Project	A residential cum commercial structure having basement and seven floors ( 03 for commercial use and four for residential use)
Number Of Floor	07

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[A.A. Mishra, Secretary]

Landscaped Green Area	1000 sq mt
Total Water Requirement	326 KLD
Total Fresh Water Requirement	143 KLD
Total Waste Water Generation	170 KLD
Total treated water generation	159 KLD
Solid Waste Generated	803 kg
Total Parking Space	Basement & Open ó 12317 q mt for 375 number
Total Power Requirement	5000 KW
Number of DG set	1 DG set of 1010 KVA
Total Height Of Building	24 mt
MOS	Front - 15 mt Rear - 6 mt Side - 7.5 mt and 6 mt
Distance Of Fire Station	1.30km

**Details of approvals obtained / applied for**

- T & CP Approval- 22/Tak/Na. Gra. Ni/13 , dt 15.01.2013
- Minutes of empowered committee of Govt of MP of re-densification scheme dated 30.11.12
- NOC from water supply from Rewa Municipal corporation
- Application for consent of treated water disposal and MSW disposal is under active consideration

**Statement of area**

Residential Building: -

Total Number of Residential Units : 104 Nos.

Commercial (shops) : 450 No

Food court : 01

Multiplex : 01

Hotel : with 16 rooms

Parking Area : Basement 10292 sq mt + Open 2025 sq mt

Number of vehicles : 375

<b>Statement of Area</b>	
Total Land area	16782.00 sq mt
Area for commercial zone	15000.00 sq mt
Permissible ground coverage (40%)	6000.00 sq mt
Permissible FAR	2.0
Permissible built up area	30,000 sq mt

<b>Particular</b>	<b>Details</b>
<b>Proposed ground coverage Block-1</b>	

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Covered area on ground floor (commercial and residential building)	5816.47 sq mt
Less- Lift, Staircase, ent looby, ramp etc	1828.91 sq mt
Net covered area on ground floor	3977.56 sq mt
<b>Proposed ground coverage Block-2</b>	
<b>Commercial zone block -2</b>	3442.39 sq mt
Less- Lift, Staircase, ent looby, ramp etc	1421.48 sq mt
Net covered area on ground floor	2020.91 sq mt
<b>Total Proposed ground coverage</b>	<b>5998.47 sq mt</b>

<b>Parking area Calculation</b>	
<b>Required parking for Block-1</b>	
Required parking in ECS for Commercial (Ground, 1 <sup>st</sup> & 2 <sup>nd</sup> floor = 1ECS per 75 sq mt of b/u area)	11898.84 sq mt 11898.84/75 ECS
Thus required parking in ECS	158 ESC
Required parking in ECS for Residential (3 <sup>rd</sup> , 4 <sup>th</sup> , 5 <sup>th</sup> & 6 <sup>th</sup> floor = 1 ECS per 100 sq mt of b/u area )	8841.87/100 ECS
Thus required parking in ECS	88 ECS
<b>Total</b>	<b>246</b>
<b>Required parking for Block-2</b>	
Required parking for ECS for commercial ( 1ECS per 75 sq mt of b/u area)	9667.84 sq mt 9667.84 /75
Thus required parking in ECS	128
<b>Total required parking in ECS in Block-1 &amp; Block-2</b>	<b>246 + 128 = 374</b>
<b>Parking Provided</b>	
<b>Basement Floor</b>	
Total built up area in Basement-1 ( @ 35 sq mt per ECS)	10292 sq mt 10292/35 ECS
Thus parking proposed in Basement in ECS	294 ESC
<b>Open Off Street surface parking</b>	
Total area under open off street surface parking Proposed area under open off street surface parking( @ 25 sq mt per ECS)	2025 sq mt 2025/25
Thus the parking proposed under open off street surface parking	81
<b>Total parking in ECS in Block-1 &amp; Block-2</b>	<b>375</b>

**Source of water supply**

1. In construction phase we will take water supply form the private tanker suppliers
2. The project is having involvement of Govt of MP and proposed at middle of town under re densification scheme, Water supply shall be made by Rewa municipal corporation. Letter in this regard has been given by the corporation.

**Water balance:**

Total Water Requirement = 326 KLD

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Total Waste Water generation	= 170 KLD
Treated water available	= 140 KLD
Total Flushing Water Requirement	= 41 KLD
Water requirement for horticulture purposes	= 07 KLD
Water requirement for HVAC	= 119 KLD
Total recycle water requirement	= 167 KLD
Net Fresh domestic water requirement =	= 159 KLD
Excess treated water available	= Nil

### **Environment Management Plan**

#### **STP Details**

- É The Sewage Treatment Plant based on SAFF technology will be designed to treat a sewage quantity of 200 cu.mt./day having characteristics as mentioned above.
- É It is based on aerobic suspended growth process and used in the secondary treatment effluent/sewage treatment plant

#### **Solid waste management**

It is estimated that at about 803 kg per day of waste will be generated from the project during the operation

##### **Construction Debris**

Construction debris is bulky and heavy and re utilization and recycling is an important strategy for management of such waste. As concrete and masonry constitute the majority of waste generated, recycling of this waste by conversion to aggregate can offer benefits of reduced landfill space and reduced extraction of raw material for new construction activity.

- Recycled aggregate will be used for filler application, and as a sub base for road construction. Mixed debris with high gypsum, plaster, shall not be used as fill, as they are highly susceptible to contamination, and will be given to recyclers.
- Construction contractors shall remove metal scrap from structural steel, piping, concrete reinforcement and sheet metal work from the site. A significant portion of wood scrap can be reused on site. Recyclable wastes such as plastics, glass fiber insulation, roofing etc shall be sold to recyclers.

#### **Operation Phase**

##### **Collection and transportation**

- During the collection stage, the biodegradable and non- recyclable/ non biodegradable waste will be stored and collected separately. The non- recyclable and non-biodegradable waste, sludge from STP and Biodegradable waste will be deposited at a landfill site.
- To minimize littering and odours, waste will be stored in well designed containers/bins that will be located at strategic locations to minimize disturbance in traffic flow.
- The collection vehicles will be well maintained to minimize noise and emissions, and while transporting waste, these will be covered to avoid littering.

##### **Disposal**

- With regard to the disposal/treatment of waste, the project will obtain a due permission from the Rewa Municipal Corporation.

#### **Environmental management plan-air environment**

##### **Construction Phase**

- Transportation of Raw material during Non peak hours
- Idling of delivery trucks should not be permitted on roads
- Use of ready mix concrete carried in enclosed container
- Dust covers on trucks used for transportation of material

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- Equipment shall be located away from sensitive receptor location
- Frequent water sprinkling to prevent fugitive dust emission
- Use of sharp teeth excavation machinery

**Operational Phase**

- DG set will have appropriate stack height as prescribed by the Central Pollution Control Board
- Proper ventilation will be provided to all parts of the building Open burning of any waste shall not be allowed.

**Environment management for noise pollution**

**Construction phase**

- Time of operation - Noisy construction equipment should be permitted with suitable precautions.
- Job rotation and hearing protection of Workers employed in high noise areas will be rotated. Earplugs / muffs or other hearing protective wear will be provided to those working very close to the noise generating machinery.

**Operation phase**

- Noise Emission Control Technologies: DG generator will have suitable acoustic enclosure which shall be designed for minimum 65 dB (A).
- Ambient Noise Monitoring shall be carried out as per direction of MPPCB

**Energy conservation measures**

- Adequate design to limit the losses in transmission and distribution system.
- Use of energy efficient devices like light sources such as true-lite fluorescent lamps and compact fluorescent lamps.
- Use of insulation on roof top to reduce air-conditioning load.
- Use of capacitors at load centers to improve voltage and power factor to reduce distributional losses and also to avoid penalty by state electricity authority.
- All high efficiency motors will be used in the proposed project
- Variable Frequency Drives are proposed to be installed for hydro-pneumatic system for water supply and Secondary chilled water pumps for air-conditioning.
- Low Loss transformer shall be used. Total losses of copper and iron are less than 1% of the capacity of the transformer in kilo watt as per ECBC Code-2007.
- Light fixtures are of Compact florescent lights with energy conservation features.
- Cables are sized to reduce voltage drops less than 2%.-Energy Conservation Building Code-2007
- Energy Measurement meters are provided in all outgoing feeders to monitor energy consumption patterns and to carry out power audits.
- Optimum utilization of the daylight to switch off during the day time in corridors.

**Fire & safety measures**

- Overhead Fire storage tanks as per NBC 2005
- Fire Hydrant System
- Automatic Fire Alarm System
- Hydrant pumps, Sprinkler pumps & Jockey pumps.
- Hand Held Fire Extinguishers
- Automatic Sprinklers System
- Wet risers, Fire Extinguishers, Hose Reel.

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[A.A. Mishra, Secretary]

After deliberations committee found the submissions and the presentation satisfactory and acceptable, hence it was decided to recommend the case for grant of prior EC subject to the following special conditions:

1. Fresh water requirement for the project shall not exceed 159 KLD.
2. No ground water use shall be made as proposed.
3. Prior EC is valid for the maximum built-up area of - 58840.47 sqm and Land Area of 1.6782 Ha, for any enhancement in the above fresh EC shall be obtained.
4. Use of Photovoltaic cells (Solar energy) in common areas to be taken up.
5. Press-filter dried STP sludge and the MSW shall not be stored at site for more than 48 hours.
6. Appropriate play spaces shall be developed in the project.
7. Green area shall be developed as per the approved lay-out plan using local plant species.
8. Parking shall be developed as the MPBVR-2012 but not less than 375 cars.

**8. Case No.-1880/2014 Shri S.P. Sharma, DGM (General), Indian Railway Station Development Corporation (IRSDC), 4<sup>th</sup> Floor, Palika Bhawan, Sec-13, R.K. Puram, New Delhi-110066.** *Prior Environment Clearance for approval of proposed Redevelopment of Habibganj Railway Station at Habibganj Suburb, Tehsil-Huzur, District- Bhopal (M.P.) Total Land Area 40.9 ha. (29.6 ha. In station plot and 11.31 ha. In railway colony plot). Total Built up Area is 945491.5 msq (544837.5 msq in Station plot and 400654 msq in railway colony plot) at Khasra no. 25, 3, 4, 20, 16, 21, 14, 15, 22, 291/15, 17, 18, 19, 306/19. Env. Consultant-ICT, Ltd, Delhi.*

The project pertains to re-development of Habibganj Railway Station located at *Khasra no. 25, 3, 4, 20, 16, 21, 14, 15, 22, 291/15, 17, 18, 19, 306/19*, Bhopal, Tehsil Huzur, Distt. Bhopal (M.P). Total land area in the project is 40.9 ha, out of which 29.6 ha shall be covered under the Railway Station re-development plan and 11.31 ha shall be covered under the residential development of Railway Colony. Total built-up area proposed in the project is 945491.5 m<sup>2</sup> out of which 544837.5 m<sup>2</sup> constructed area shall be developed under station re-development plan and rest 400654 m<sup>2</sup> built-up in the residential sector. The project is covered under EIA notification as item 8(b) of the schedule hence it requires prior EC from the SEIAA. The application was forwarded by SEIAA to SEAC for scoping so as to determine TOR to carry out EIA and prepare EMP. The salient features of the project and proposed TOR were presented by the PP and his consultant before the committee

After deliberations committee prescribed following additional TORs to be incorporated in the EIA report:

1. Detail out clearly and category-wise the tasks covered under each the Real Estate, Commercial development and the Social Infrastructure etc.
2. Lay-out detailing all the components of the projects.
3. The spatial continuity of the project after integration of all the components of the project with proposed / expected timelines for completion of various activities in the project to be furnished.
4. The waste (liquid / solid) management plan should include all the wastes expected to generate from all the components of the project.
5. Area proposed to be de-vegetated has to be clearly delineated and furnished in the EIA along with the details of no. of trees to be cut, permissions from concerned authorities, plan for compensatory plantation etc.

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6. Green area plan has to be submitted with EIA as separate chapter. The lay out depicting green covers in various sectors to be furnished.
7. Debris management to be furnished.
8. Diesel storage area to be defined mentioning all the safety and environmental management plans.
9. Solar power generation is proposed in the project; details such as- location of installation, service and maintenance, transmission net-work etc. to be furnished in the EIA report.

**9. Case no. - 735/2012 Sh. Ramlal Singh, S/o Sh. Ramgarib Singh R/o Village-Maddepur, Distt. – Rewa, ( M.P.) –486001 For- EIA Presentation.** *Sonra Lime Stone Mine at Khasra No. 148, Village – Sonra, Tehsil – Huzur, Distt.- Rewa (M.P.) Lease Area- 5.831 Ha. Capacity & Minerals: Limestone Proposed – 10,000 MTPA. ToR issued vide letter No. 635 Dt. 01/10/12. Env. Consultant – CES, Bhopal.*

The case was deferred as PP has not submitted the essential documents. The case shall be considered only after submission of the same.

**10. Case no. 731/2012 M/s Jindutt Minerals Pvt. Ltd., 6<sup>th</sup> km. Sagar Road- Dhadari, Post office & Distt. - Chhatarpur (M.P.) 471001** *Expansion of Sarkana Pyrophyllite & Diaspore Mine at Khasra No. 1440, Compartment No. – P 8, Forest Range- Bara Malhara, Forest Division – Chhatarpur, Forest Block- Sarkana, Village – Sarkana, Tehsil – Bijawar, Distt.- Chhatarpur (M.P.), Lease Area - 20.23 Ha. or (50 Acres), (Forest Land – 12.80 ha. & Revenue Land – 7.43 ha.) Proposed Capacity – 50000 TPA ( Existing 30000 TPA/ 50 Acres or 20.23 ha.) ToR issued vide letter No. 675 Dt. 05/10/2012 . Env. Consultant – Grass Roots Research & Creation India (P) Ltd. Noida (U.P.) For- EIA Presentation.*

As most of the members had not received the essential documents pertaining to project, hence the case was deferred. The case shall be scheduled for hearing in coming meetings as per turn.

**11. Case No. - 1822/2014 Shri Prakash Topnani, R/o A-49, New ACC Colony, Katni, Distt. – Katni (M.P.) 483880** *Rituwa Lime Stone Mining Project at Khasra No. – 184 & 197, Village- Rituwa Tehsil – Bahoriband, Distt. – Katni ( M.P.) Lease Area- 9.05 ha., Capacity – 28,127 TPA /Year, Lease Period – 20 Year( Valid Up to 17/11/22) . Env. Cons. – Not Mentioned. For- ToR.*

This is a project pertaining to mining of limestone, in MLA of 9.05 ha. The activity is mentioned at S.N. 1 (a) of the Schedule of EIA Notification 2006 as amended from time to time. The project is reported to be at a distance of more than 5 Km from the interstate boundary; thus is not attracted by the general conditions and falls under category -B-1ö by virtue of its location and mining lease area. Hence the project requires prior Environmental Clearance from the SEIAA. The case was forwarded by SEIAA to SEAC for scoping so as to determine TORs to carry out EIA and prepare EMP for the project.

Project proponent and his consultant presented the salient features of the project, PFR, baseline data and the proposed TOR before the committee. After deliberations committee has suggested following points to be included in the EIA report and EMP.

- Water requirement for the project when operational has to be evaluated activity-wise with justification.

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[A.A. Mishra, Secretary]

- Source of water has to be defined with permission / consent from the concerned authority.
- Details of mineral zone, out-cropped mineral, volume of top-soil and OB to be furnished in the EIA.
- Conceptual plan (pre- and post-mine) indicating land-use to be furnished.
- Micro-level features within 2 Km radius around the lease boundary to be depicted on map and furnished.
- Transport route from mine site up to the main road for transporting the material to be detailed.
- Air Quality assessment shall be carried out considering the other mines located within 2 Km radius.

**12. Case No. - 1826/2014 M/s Narayan Metals and Minerals, Mrs. Priyanka Sharma , Shop No. 3, City Bengali Club Market, Karamchand Chowk, Jabalpur (M.P)-482006 (Expansion Case) E.C For Gosalpur Manganese Ore, Iron Ore, Blue Dust, Laterite and Laterite Iron Mine at Khasra No. 116, Village-Gosalpur, The.- Sehora, District- Jabalpur (M.P.) Lease Area - 12.77 Ha., Cap. from 2100 TPA to 1.04,709 TPA. Env. Consultant – CES, Bhopal. For- ToR.**

This is a project pertaining to mining of Manganese ore, Iron ore, Laterite, Blue dust, Latertire Iron and ETC minerals in MLA of 12.77 ha. The activity is mentioned at S.N. 1 (a) of the Schedule of EIA Notification 2006 as amended from time to time. The project is reported to be at a distance of more than 5 Km from the interstate boundary; thus is not attracted by the general conditions and falls under category -B-1ö by virtue of its location and mining lease area. Hence the project requires prior Environmental Clearance from the SEIAA. The case was forwarded by SEIAA to SEAC for scoping so as to determine TORs to carry out EIA and prepare EMP for the project.

Project proponent and his consultant presented the salient features of the project, PFR, baseline data and the proposed TOR before the committee. The presentation and the submissions made by the PP reveals following:

It was submitted that this is an operating mine having valid lease up to 2029 and consents form MPPCB. The proponent wish to enhance production from 2900 tons per annum to 104709 Tons per annum. Accordingly the mine plan has been approved.

**Environment setting**

Particulars	Details
Locations	
Village	Gosalpur
Tehsil	Sihora
District	Jabalpur
State	MP
Latitude	23° 23' 40.1" to 23° 23' 57.9" North
Longitude	80° 02' 49.7" to 80° 03' 00.7" East
Co-Ordinate	1. 23° 23' 57.9" - 80° 02' 59.5" 2. 23° 23' 40.1" - 80° 02' 58.3" 3. 23° 23' 49.9" - 80° 02' 50.3" 4. 23° 23' 57.5" - 80° 02' 56.9"

[R.B. Lal, Chairman]

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[A.A. Mishra, Secretary]

Nearest Village	Gosalpur - 0.70km - E
Nearest National/state Highway	Jabalpur ó Varanasi - NH-7 ó 1.0km- SE
Nearest Railway Station	Gosalpur - 2.0 km
Nearest Airport	Jabalpur - 24.0 km
Nearest Tourist Place within 10km radius.	None within 10km radius
Archaeological Important Place within 10km radius.	None within 10km radius
Ecological Sensitive Areas (Wild Life Sanctuaries) within 10km radius.	None within 10km radius
Reserved / Protected Forest within 10km radius (Boundary to boundary distance)	Borha RF -9.0km - SE
Nearest major city with 100000 population within 10km radius	Nil
Nearest Town / City within 10km radius	None
Nearest River	Heran River - 2.0 Km - NW Barne Nadi - 7.0km ó ENE
Nearest Nalla/ pond	Budhasagar Tank - 4.0km ó SW Barne Reservoir - 9.0km - SE Maral Reservoir - 10.0km ó SE Gosalpur Talab - 1.5km ó ESE Local Nalla - 0.7km - N
Nearest Hill Ranges	None within 10km radius
Other lease area within 500m radius	Lease area of M/s S. S. Enterprises

It was reported by the PP that

- The fresh lease was granted for period of 20 years from 08.04.2009 to 07.04.2029.
- The lease area comes under govt. waste land
- One other lease area are located within 500m radius
- The PP has already been obtained environmental clearance from SEIAA vide letter no. 256/EPPCO-SEIAA/10 dated 26/07/2010 for existing capacity. Present proposal for capacity expansion from 2900 TPA to 104709 TPA
- The PP has already been obtained CTO from MPPCB which is valid up to 30.10.2015
- The scheme of mining with progressive mine closure plan has been approved by IBM, Nagpur

**Sailent feature of the lease area**

Particulars	Details
Type of Mine	Open Cast
Mining Lease Area	12.77 ha
Mineable Area	4.1225ha

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[Manohar K. Joshi, Member]

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Existing Pits & Quarries	0.6277ha
Existing Dumps	0.3432ha
Plantation	0.2 ha
Recoverable Reserve	633336 T
Method of mining	OTFM
Ultimate Depth of Mining	14m (376mRL)
Ultimate Pit Slope	45 <sup>o</sup>
Expected Life of Mines	6 years
Lease Period	20 year upto 2029
Stripping Ratio	1 :0.26 to 1:0.85
Existing mode to transportation	Road
Area to be covered under dumps in conceptual period	2.2345ha
Area covered under pit in conceptual period	4.1225ha
Area to be reclaimed by conceptual period	0.0245ha
Area to be covered under plantation by conceptual period	6.0Ha
Area to be covered under water reservoir	1.6255ha
Elevation	441-390mRL
Ground water table	
Monsoon period	10m bgl (380mRL)
Dry month	12m bgl (378mRL)

**Mining Method**

- Existing mining is being carried out by the open cast manual method using hand tools such as spades, chisel, hammer etc. and very occasional deployment of heavy earth moving machineries for excavation, loading & transportation on single shift basis in the iron ore, Mn ore and Laterite deposit at the east central part of the quarry.
- Three to four developments cum production benches of 2-6m height have developed at the south-eastern side of pit 1. The use of rock breaker has been done to loosen the boulder and massive formation
- For capacity expansion, it is proposed to adopt other than fully mechanised mining. All operations of mining will be done by deployment of heavy earth moving machineries for excavation, loading & transportation on single shift basis.
- Proposed development will be carried out with 9 benches of each 6m height and all benches will be development cum production benches. The individual bench faces will kept nearly vertical (80<sup>o</sup>-85<sup>o</sup>) while the pit slope will be less than 45<sup>o</sup>.
- The massive and hard Laterite and iron ore strata will be loosened through rock breaker.
- For facilitating the movement of laborers between bench foot steps are proposed. 10-12m wide haul road is proposed with the gradient of 1:16 to 1:20.
- Presently 0.6277ha area has been excavated up to 382mRL and during the ensuing five year development, fresh area of 1.3ha will be developed around the pit no.1 and pit-2 and cumulative area around 1.9277ha will be developed, the Mn ore zone will be developed up to 410mrl while iron ore fines zone will be developed with 382mrl (avg.) i.e. average 18m deep with a semi rectangular shape. Ground water seepage may encounter because the

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proposals of 5<sup>th</sup> year will be near to GWT hence in post monsoon season continuous dewatering will be done with two to three 10HP water pumps.

**Existing and proposed land use plan**

<b>Total lease area</b>	<b>12.77ha</b>	
Ultimate depth of mining	8m bgl	14m bgl
Ultimate pit slope	45 degree	45 degree
Area under dumps	0.3432ha	2.2345ha
Area under pits	0.6277ha	4.1225ha
Area to be reclaimed	Nil	0.0245ha
Infrastructure & Road	0.1280ha	0.1280ha
Mineral storage	0.30ha	0.62ha
Plantation	0.2ha	6.0ha
Water body	0.32ha	1.6255ha
Area to be rehabilitated	Nil	2.4725ha

**Existing waste management**

Dump no	Type active / inactive	Quantity m3	Base area M2	(AV) height M	Area stabilized M2	Remark
D1	Active	840	280	3	NIL	All dumps weathered ferruginous and phyllitic waste material waste dumps will be rehandled for approach road construction
D2	Active	204	102	2	NIL	
D3	Active	150	75	2	NIL	
D4	Active	175	175	1	NIL	
D5	Active	11200	2800	4	NIL	
TOTAL		12569	3432	1-4	NIL	

**Afforestation plan**

Year	Unworked area green belt		Outside dumps (reclaim)		bench of pit/		Inside dump		Total	
	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees
Present	0.2	200	-	-	-	-	-	-	0.2	200
1 <sup>st</sup> to 5 <sup>th</sup>	0.5	750	-	-	-	-	-	-	0.5	750
6 <sup>th</sup> to conceptual period	0.8	1200	-	-	2.4725	3710	2.2345	3350	5.507	8260
<b>Total</b>	<b>1.5</b>	<b>2150</b>	<b>-</b>	<b>-</b>	<b>2.4725</b>	<b>3710</b>	<b>2.2345</b>	<b>3350</b>	<b>6.2070</b>	<b>9210</b>

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After deliberations following additional TORs have been prescribed for inclusion in the EIA report:

- Report on compliance of the EC conditions, duly authenticated, to be submitted.
- Production data for previous years with due validation from the concerned authority to be submitted.
- Hydro-geological studies to be carried out in view of ground water inception.
- Transport route from mine site up to the main road for transporting the material to be detailed.
- Air Quality assessment shall be carried out considering the other existing mines within 2 Km radius.
- Drawing and dimension of the ultimate water body intent to be developed after the mine is exhausted to be furnished.
- The baseline data being collected may be used in the EIA report.

**13. Case No.-1832/2014 M/s Trent Chemical Industries, Partners Praful G Patel, N-78, Anoop Nagar, A. B. Road, Indore-(M.P.) 452008 - E.C of Proposed Trent Chemical Industries at Plot No. -184-A, Meghnagar ,Tehsil-Meghnagar, District Jhabua, (M.P.) Env. Consultant – EQMS. For- ToR.**

The project pertains to manufacturing of Dyes Intermediate the project is mentioned under item 5 (f) of the schedule of EIA notification. Hence requires prior EC from SEIAA. The application has been forwarded from SEIAA to SEAC for scoping so as to determine TOR to carry out EIA and prepare EMP. Salient features and proposed TOR were presented by the PP and his consultant which reveals following:

**Project at a Glance**

Name of Project	Manufacturing Plant for Dyes Intermediate (H-Acid and other Intermediates)
Project Location	Meghnagar Industrial Estate, Indore, Madhya Pradesh
Total Plot Area	Total Plot Area: 26000 m <sup>2</sup> Greenbelt Area: 9100 m <sup>2</sup> (this is equal to 35% of total plot area)
Proposed Prod. Capacity ( Dyes Intermediate)	H-Acid (200 MT/ Month) , PNTOSA (200 MT/ Month) Gama Acid (25 MT/ Month) , K- Acid (25 MT/ Month) Metanilic Acid (50 MT/ Month) , DASDA (200 MT/ Month)
Project Cost	50 Cr. (INR).
Power Supply	2000 KVA source: <i>Madhya Pradesh State Electricity Board</i> (MPSEB), Meghnagar Back Up /Power Failure: 1000 KVA DG Set
Water Consumption	398 KLD (source: AKVN water Supply and bore well)
Fire and Safety	Provision of ventilated store without any electric lighting for Napthalene, Fire hydrant system

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Man Power	250 people.
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**Area- Breakup**

SN	Title	Area,m2	% of total Area
1	Plant Facilities	2600	10 %
2	Tank Farm Area	520	2 %
3	Raw material go down	780	3 %
4	Electrical Substation/GOD/Panel room	780	3 %
5	Storage (water)	260	1 %
6	Storage (Hazardous waste)	2340	9 %
7	Hardwar store/work shop	520	2 %
8	Utility plant	1560	6 %
9	ZLD plant	780	3 %
10	Weigh bridge	260	1 %
11	Green belt	9100	35 %
12	Office	520	2 %
13	Parking	260	1 %
14	Road/Block floor	4420	17 %
15	Open to sky	1300	5 %

Total Production Capacity			
SN	Product Name	License Capacity	
1	H-Acid	200 MT/Month	
2	PNTOSA	200 MT/Month	
3	Gama Acid	25 MT/Month	
4	K Acid	25 MT/Month	
5	Metanilic Acid	50 MT/Month	
6	DASDA	200 MT/Month	
By-Product			
SN	Product Name	License Capacity	Origin
1	Sodium sulphate	840 MT/Month	ZLD Plant, Crystallizer and MEE of H-acid
2	Gypsum	2986 MT/Month	Neutralization Reaction, From H-acid and ZLD
3	Liquid sodium Bi sulphate	430 MT/Month	Sox Scrubber System From H-acid, etc
4	Dil Nitric acid / Nitrite sol.	195 MT/Month	NOx Scrubber System From H-acid,
<b>TOTAL</b>		<b>26000</b>	<b>100%</b>

**Raw Material Requirement** –Naphthalene Oleum Acid (65%), Sulphuric Acid (98%), Caustic Soda Lye, Methanol, Nitric Acid, Oleum Acid (23%), Liquor Ammonia, Nitro Benzene, Para Nitro Toluene, Beta Naphthol, Caustic Soda Flakes, C.I. Powder, Soda Ash, Lime Stone Powder, Sodium Bisulphite, powder Ammonium Chloride, Sodium Chloride and Hydrated Lime

**Waste Water Generation**

S N	Effluent Generation Area	Total KLD	Disposal Mode
1	Domestic	5 KLD	Sock Pit

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		15 KLD	STP plant
2	Industrial		
	i. Processing	184 KLD	Send to ZLD plant for treatment
	ii. Washing	54 KLD	Send to ZLD plant for treatment
	iii. Cooling tower	5 KLD	For Gardening and Green belt
	iv. Boiler	5 KLD	For Gardening and Green belt
	v. RO plant	32 KLD	For Gardening and Green belt
	vi. Scrubber	11 KLD	Convert in to By product
3	Gardening		
	Industrial total	311 KLD	

After deliberations following additional TORs have been prescribed for inclusion in the EIA report:

- Other technological options and justification for selection of the proposed technology to be furnished.
- Analyses including TCLP of all the by-products / wastes expected to generate from the process to be carried out and reported.
- Based on the analyses and TCLP, mode of storage and disposal to be planned and explained in the EIA report.
- Solvent balance, water balance and material balance to be detailed out.
- Worst-case scenario w.r.t. air and water quality expected from various processes to be evaluated and dealt in terms of EMP for the same.
- Process adopted for achieving zero-discharge.
- The proposed modus-operandi of the EMP considering the inter-changeability of products / processes.
- Hazardous / disaster risk studies and management plans including the on-site and off-site emergency plans to be furnished.
- Impact assessment on Ground-water and management plan to be furnished.
- Impact assessment on Soil and proposed mitigation to be detailed out.
- Plans for prevention of pollution of river.
- Raw material inventory with their pollution/risk potential and safety measures to be furnished.
- Storage plan for storing various chemicals with environmental safe-guards proposed in the work-place to be detailed out.
- Alarm systems proposed and other safety measures envisaged in the project to detailed out.
- Public Hearing has to be carried out disclosing all the facts on process, possible disasters with proposed mitigations, expected air/water pollution from the project and the mitigations proposed thereby.

**14. Case No.-1833/2014 M/s Birla Corporation Limited Unit- Barnagar ( M.P.) through Shri V.K. Hamirwasia President, Barnagar, Sector- Madhav Nagar, Chanderia, Chittorgarh (Raj.)--021\_M/s Birla Corporation Limited Unit: Barnagar (M.P.) proposed Capacity 2 X 1.0 MTPA Cement Grinding. Unit Phase – I -1.0 MTPA Cement Grinding Unit. Phase-II- 1.0 MTPA Cement Grinding Unit. Total Project Area: 26.87 Ha. at Village Karadiya & Khedamdhav, Tehsil Barnagar, District Ujjain (M.P.).Env. Consultant – CES, Bhopal. For- ToR.**

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[Dr. Manoj Pradhan]

[Manohar K. Joshi, Member]

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This is a project pertaining to stand alone cement grinding with production capacity of 1.0 X 2 million tonnes/annum. Phase wise units shall be installed. The project is covered as item 3 (b) in the schedule of EIA Notification hence requires prior EC from SEIAA. The application for the same has been forwarded by SEIAA to SEAC for scoping so as to carry out EIA and prepare EMP. The salient features and proposed TOR were presented by the PP and his consultant which reveals following:

**Salient features of the project:**

S. No.	Particulars	Details
1	Project	<b>2X1.0 MTPA Cement Grinding Units</b> <b>Phase – I – 1.0 MTPA</b> <b>Phase – II – 1.0 MTPA</b>
2	Total Power requirement for process	7.5 MW for Phase I, 5.0 MW for Phase - II
3	Total Land available	26.87 Hact
4	Raw material required	Clinker, Fly Ash and Gypsum
5	Source of Power	Madhya Pradesh State Electricity Board (MPSEB).
6	Water Requirement	<b>Phase – I 6 95KLD</b> <b>Phase – II - 70 KLD</b>
7	Source of Raw water	Ground water / Rainwater Harvesting
8	Major Plants / Equipment	Cement Grinding & Packing Unit
9	Capacity of Cement Mill	160 TPH
10	Pollution control equipment	Bag Filters & Water Sprinklers
11	Level of particulate Matter after APCE	Less than 50 mg /NM3
12	Cost of Pollution Control Equipments	Approx 4.0 Crores
13	Number of employment generation	50 persons for Operations and 350 persons for Project execution
14	Fund for CSR activities	As per guidelines.

**Environmental Setting within 5 Km. Radius**

S. No.	Particulars	Details
1	Latitude	23° 30' 15.84" to 23° 26' 06.96" N
2	Longitude	75° 23' 04.128" to 75° 24' 07.26" E
3	Height above mean sea level	497 Mtrs.
4	Nearest Town	Barnagar ~ 3.0 km
5	Nearest Railway Station/Town	Barnagar ~ 4.0 km
6	Nearest Airport	Indore ~ 90.0 km
7	Nearest Highway/Road	SH-18 ~ 2.1 kms
8	Nearest Village	Khaidamadhav
9	Hills/Valley	None
10	Ecological Sensitive Zone	None
11	Reserve Forest	None
12	Historical Place	None
13	Nearest River/ Nallah	Chamli- 1.4 km - West

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[A.A. Mishra, Secretary]

		Nallah- Seasonal along west & south boundary (50 mt) Pond ó Dolona village- 8 km west
14	Other industries in 5 km radius	No major industry

**Land use of the Plant Site**

S. N	Section	Area (m2)
1	Plant machineries	20000
2	Material storage	15000
3	Roads	40000
4	Offices	3200
5	Future expansion	36600
6	Railway track & siding	63900
7	Green Belt	90000
	Total	268700

**Raw Materials & Product**

S. N	Particulars	Quantity in LTPA		Source	Mode of Transportation	Type of Storage
		Phas-I	Pha -II			
1	Clinker	7.3	7.3	BCL ,Chandaria	Rail/Road	RCC silo.
2	Fly Ash	2.0	2.0	MPPGENCO, Mundi (M.P.)	Rail/Road	RCC silo.
3	Gypsum	0.7	0.7	Rajasthan / Import	Rail/Road	Covered stockpile
4.	Cement					RCC silo.

Source:

- ❖ The water requirement for plant is proposed to be sourced through ground water / rainwater harvesting.
- ❖ Project proponent have already applied for permission for drawl of ground water from CGWB.

After deliberations following additional TORsø have been prescribed for inclusion in the EIA report:

- Other technological options and justification for selection of the proposed technology to be furnished.
- Source of all the raw material including the fly-ash and clinkers along with the transportation route to be detailed out.
- Air quality modeling for point as well as line source to be depicted and presented considering the sources and the sensitive receptors.
- Hot spots within the premises and the transport route to be identified and specific EMP for the same has to be suggested with budgetary provisions.

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- Detailed scheme for plantation to be submitted with areas demarked on lay-out for greening.
- Activity-wise annual budget for executing the EMP has to be furnished.
- Details of Environmental cell to be deputed in the project with the responsibilities assigned to each of the members of the cell.
- It was suggested by the committee to plan for high volume ash-concrete roads (more than 40% ash) within the premises; detailed plan for the same to be submitted with EIA.
- Public Hearing has to be carried out disclosing all the facts on process, possible disasters with proposed mitigations, expected air/water pollution from the project and the mitigations proposed thereby. All details of the proposed land (present land-use, ownership status diversion (if any) permissions etc. have to be disclosed before the public.

**15. Case No.-1841/2014 Shri Mukund Jaiswal, Kolgawan Post-Satna, Distt- Satna (M.P.)-485001 Birahuli Limestone Deposit Mine, Lease Area - 29.951 ha. Proposed Capacity - 5,00,000 TPA ( 3,50,000 TPA of Limestone & 1,50,000 of Reject stone) at Khasra No-95/1, 95/2, 96/1, 96/2, 96/3, 96/4, 100/1, 100/2, 102,103, 104, 105, 107, 108, 109, 113/1, 113/2, 113/854/1, & 113/854/2 at Village-Birahuli, Tehsil - Raghuraj Nagar, Distt- Satna (M.P.)-485001 Env. Consultant – Greenc india Consulting Pvt. Ltd., NCR, Ghaziabad For – ToR.**

This is a mining project proposed in a lease area of 29.951 ha with production capacity of 5,00,000 TPA ( 3,50,000 TPA of Limestone & 1,50,000 of Reject stone). The project is covered as item 1(a) in the schedule of the EIA Notification hence requires prior EC from SEIAA. The application for the same has been forwarded by SEIAA to SEAC for scoping so as to determine TOR to carry out EIA and prepare EMP. Salient features of the project and the proposed TOR were presented by the PP and his consultant before the SEAC. The presentation and the submissions made by the PP reveals following:

- The lease area was sanctioned under prospecting license by the State Government of M.P. vide their letter no.-2-146/2008/12/2 Bhopal dated-30.07.2009 for the duration of 1 year.
- After prospecting operation, Shri Mukund Jaiswal applied for mine lease on 29-07-2010.
- A communication letter of precise area was issued by the State Govt.vide letter No.-F-3-4/2012/12-1, Bhopal, Dated-31.07.2013 for grant of ML.
- The mine plan has approved by Indian Bureau of Mines, Jabalpur vide letter no-MP/SATNA/LIMESTONE/MPLN/G-08/13-14/3741 dated 09.07.2014.
- The project is an open cast fully mechanized mine. All operations of mining will be done by deployment of HEMM. The total mining lease area is 29.951 Ha.
- Proposed Capacity of the project is 5.0 lac TPA (Limestone 3.50 Lac TPA + Reject Stone 1.50 lac TPA)
- The mineral Limestone will be used in nearby cement plants and Reject Stone as building material or road metal.

**Salient features of the project:**

Description	Details
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[Shri M.P. Singh, Member]

[Dr Krishnan Iyer, Member]

[Dr U.R. Singh, Member]

[Dr. Alok Mittal, Member]

[Dr. Mohini Saxena, Member]

[Dr. Manoj Pradhan]

[Manohar K. Joshi, Member]

[A.A. Mishra, Secretary]

Project Location	Birahuli Village, Raghuraj Nagar Tehsil, Satna District, Madhya Pradesh
Total Area	29.951 Ha
Proposed capacity	<b>500000 TPA</b> 350000 TPA of limestone 150000 TPA of rejected stone
Technology	Fully mechanized
Life of the mine	20 years
Seismic Zone	Zone-II as per IS: 1893 (Part-1) 2002
Topo-sheet No	63 D/14
Project cost	3 Crores
Villages	Birahuli
Tehsil	Raghuraj Nagar
District	Satna
State	Madhya Pradesh
Nearest town	Satna About 5 Km
Nearest railway station	Satna Railway Station, 9 km
Nearest Airport	Rewa Airport, About 35 km
Nearest road	Satna-Birsinghpur road, 50 m

Latitude	Latitude
24°37'18.2" N	80°54'24.1" E
24°37'14.8" N	80°54'24.1" E
24°37'06.9" N	80°54'24.1" E
24°37'00.6" N	80°54'24.1" E
24°36'48.8" N	80°54'24.1" E
24°36'1.9" N	80°54'24.1" E
24°36'57.9" N	80°54'24.1" E
24°37'09.7" N	80°54'24.1" E
24°37'10.9" N	80°54'24.1" E
24°37'15.0" N	80°54'24.1" E

[R.B. Lal, Chairman]

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[A.A. Mishra, Secretary]

Elevation 314.01 m to 315.55 m	
Slope Towards North	
Nearest RF	2.0 km, SE
Tons/Tamsa River	4.8 km, S
Birla Cement Plant	4.5 km, SW
Satna	4 km, SW
Kamal Steel Plant	7 km, W
Satna-Birsinghpur road	Adjacent
NH-75	5.6 km, S
Revati Cements	8 km, NW
Simrawal Nadi	8.5 km, NE
Rani Talav	7 km, SSE
Maitri Bagh Lake	7.5 km, SW

After deliberations following additional TORs have been prescribed for inclusion in the EIA report:

- Air quality modeling for point as well as line source to be depicted and presented considering the adjoining Cement Plants, mines and the sensitive receptors.
- EMP based on above to be incorporated.
- Micro-level survey of the features existing within 2 Km radius around the project boundary to be depicted on the map and presented with the EIA.
- Map depicting the locations of all the operational / exhausted / proposed mines in the region to be furnished and discussed.
- Top-soil Management Plan to be submitted.
- OB-management Plan with spatial depictions to be furnished.
- Public Hearing has to be carried out disclosing all the facts on process, possible disasters with proposed mitigations, expected air/water pollution from the project and the mitigations proposed thereby. All details of the proposed land (present land-use, ownership status diversion (if any) permissions etc. have to be disclosed before the public.

**16. Case No.-1854/2014 Mr. R.A. Joshi, Depot-in-Charge, Bhitoni, BPCL, Bhitoni POL Depot. N.H. 12, Shahpura, District-Jabalpur (M.P.)-483119 Construction of New Storage Tank at BPCL Bhitoni POL Depot, NH12, Shahpura, District-Jabalpur (M.P.)Area-27.41 Acres Storage Capacity (Existing) 12818 KL Class A 2618 KL Class B 10200 KL Storage Capacity ( Revised) 20241 KL Class A 6033 KL Class B 14910 KL. Env. Consultant – Not Mentioned. For – ToR.**

The project pertains to expansion in the storage capacity of POL depot through construction of a new storage tank. The project is covered as item 6(b) in the schedule of EIA Notification hence requires prior EC from the SEIAA. The application was forwarded by the SEIAA to

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[Dr. Mohini Saxena, Member]

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SEAC for scoping so as to determine TOR to carry out EIA and prepare EMP. Salient features of the project, proposed TOR and other details of the project were presented before the SEAC by the PP and his consultant, which reveals following:

- BPCL has proposed to enhance the capacity of MS & HSD in existing POL Depot, Bhitoni, Madhya Pradesh and other allied facilities.
- The input to the Bhitoni Depot is mainly from Bina Dispatch Terminal and BPCL Manmad Installation for receipt, storage and dispatch of MS, SKO and HSD by railway tankers (receipt), Ethanol by road tanker (receipt) and road tankers (dispatch).
- Existing Depot occupies an area of 34.0 acres.
- The Depot presently has 12818 KL of Tankage for handling Motor Spirit, High Speed Diesel, Superior Kerosene and Ethanol.
- Augmentation of existing depot with following tank capacities has been proposed:
  - MS storage tank : Above Ground 6 1x 3415 KL (FR)
  - HSD storage tanks : Above Ground Tanks 6 1x 4710 KL(CR)

Product	Tankage capacity in KL (Existing)	Tankage capacity in KL (Revised)
Class A	2618 KL	6033 KL
Class B	10200 KL	14910 KL
Total	12818 KL	20241 KL

- **Project cost : Rs 5.44 Crore (Approx.)**

**Location of the project:**

Latitude	23° 08'44.5" N to 23° 08'34.7" N
Longitude	79° 41'08.8" E to 79° 41'02.1" E
Altitude	380 m above MSL
Total Area	34.0 Acres
Nearest Town	Bhitoni
Nearest Highway	NH-12
Nearest Railway Station	Bhitoni, 1.5 KM, SW
Reserve Forest /Protected Forest	NIL
Seismic Zone of Site	Zone-IV

After deliberations following additional TORs have been prescribed for inclusion in the EIA report:

- Details of the plans to meet out crises such as fire accident to be furnished & presented.
- Details of existing on-site / Off-site emergency plan and the proposed modification in view of expansion to be submitted.
- Details of existing Safe Guards (Environmental as well as safety) and the proposed augmentations to be presented in the report.
- VOC shall be monitored along with other parameters in the Ambient Air Quality.
- Study of the ground-water regime shall be incorporated in the EIA study.
- Pre-dominant wind direction to be ascertained and accordingly the Safety & Environment Management Plans prepared and reported.

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- Public Hearing has to be carried out disclosing all the facts on process, possible disasters with proposed mitigations, expected air/water pollution from the project and the mitigations proposed thereby. All details of the proposed land (present land-use, ownership status diversion (if any) permissions etc. have to be disclosed before the public.

**17. Case No.-1856/2014 Shri Naresh Chandra Desai, Sr. Dy. GM (Geology), The Madhya Pradesh State Mining Corporation Ltd., Paryawas Bhawan, Block No. 1, Second Floor (A), Jail Road, Bhopal (M.P.)-462011 Mardeora Rock Phosphate Mines Lease Area – 48.758 ha. at Khasra No. – 125/1, 917, 953/1, Village-Mardeora, Tehsil-Baxwaha, District-Chhatarpur (M.P.) Capacity: 155000 TPA/Year, Env. Consultant – CES, Bhopal. For- ToR.**

This is a project pertaining to mining of Rock Phosphate in MLA of 48.758 ha. The activity is mentioned at S.N. 1 (a) of the Schedule of EIA Notification 2006 as amended from time to time. The project is reported to be at a distance of more than 5 Km from the interstate boundary; thus is not attracted by the general conditions and falls under category B-1ö by virtue of its location and mining lease area. Hence the project requires prior Environmental Clearance from the SEIAA. The case was forwarded by SEIAA to SEAC for scoping so as to determine TORs to carry out EIA and prepare EMP for the project.

Project proponent and his consultant presented the salient features of the project, PFR, baseline data and the proposed TOR before the committee. The presentation and the submissions made by the PP reveals following:

It was submitted that this is an operating mine having valid lease up to 2017 and consents form MPPCB. The proponent wish to enhance production from 26300 tonnes per annum to 155000 Tonnes per annum. Accordingly the mine plan has been approved.

**Environment setting**

Geological Location	Latitude 24°21'28" to 24°22'35"N Longitude- 79°08'55" to 79°10'40"E
Nearest City	Tikamgarh 50.00km
Nearest Railway Station	Tikamgarh 55km
Nearest Airport	Khajuraho -90 km
Nearest Highway	NH-86-1.0km
Nearest Village	Mardeora 0.7Km - S
Hills/Valley	None in 10 km radius
Ecological Sensitive Zone	None in 10 km radius
Historical Place	None in 10 km radius
Reserve Forest	Indora RF - NE 5km, Tigoda RF -E-1.0km, Hirapur PF - SE-1.5km, Shahgarh RF- SW- 4.5km
River/nalla	Bila River-W-4.5km, Lanch Nadi-W-3.25km, Ratua Nalla-

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	E-1.5km, Kalidhar Nadi-E-6.25km, Chandaiya Main Canal-W-1.5km, Local Pond-S-1.0km
Annual Climatic Conditions	Max. Temperature ó 46.2 Min <sup>m</sup> Temperature ó 4.2°C Average Rainfall ó 800 mm
Nature of Mine	Govt. Revenue Land ó 48.758 Ha
Type of Land	Barren Land
Surroundings	ML is undulating and hilly on a mound running south-east-north-west. The ML area devoid of RF/National park/Sanctuary/ Biosphere reserve/ Monuments/ Heritage sites
Altitude	Highest- 408 m AMSL Lowest- 384 m AMSL
Co-ordinate	C-1 - 24 22 <sup>0</sup> ø4.6ö N - 79 09 <sup>0</sup> ø00.4ö E C-12 - 24 21 <sup>0</sup> ø48ö N - 79 10 <sup>0</sup> ø29.5ö E D-2 - 24 21 <sup>0</sup> ø4.3ö N - 79 10 <sup>0</sup> ø26.1ö E D-8- 24 22 <sup>0</sup> ø18.5ö N- 79 09 <sup>0</sup> ø33.8ö E D-13 - 24 22 <sup>0</sup> ø36.9ö N - 79 09 <sup>0</sup> ø05.1ö E

It was reported by the PP that

- The fresh lease was granted for period of 20 years from 1997 to 2017.
- The lease area comes under govt. waste land
- One other lease area are located within 500m radius
- The PP has already been obtained environmental clearance from SEIAA vide letter no. 465/EPCO-SEIAA/12 dated ó 30.06.2012 for existing capacity. Present proposal for capacity expansion from 26300 TPA to 155000TPA
- The PP has already been obtained CTO from MPPCB which is valid up to 14.03.2015
- The scheme of mining with progressive mine closure plan has been approved by IBM, Nagpur
- It was reported that baseline data of the region has already been statretd from 15<sup>th</sup> Sept., 14 (Post Mansoon)

**Salient feature of the lease area**

Nature of Mining	Open Cast/ Other than fully mechanized mine with crusher
Mineable area	48.758 Ha
Geological Reserve	2204764 MT
Mineable Reserve	1739174 MT
Proposed Production capacity	155000 TPA

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Life of Mine	13 year
Present Depth of Mining	11 m bgl (373AMSL)
Ultimate depth of Mining	14m bgl (370AMSL)
Ground Water Table	12-14mbgl (372-370AMSL) Post Monsoon 18-20mbgl (366-364AMSL) Pre-monsoon
Use of mineral	Fertilizer industries
Thickness of Top Soil	Min.- 0.0 m, Max. ó 0.50 m, Avg.- 0.25m
Thickness of Overburden	Min.- 0.0 m, Max. ó 3.0 m, Avg.-1.5 m
Altitude	408-384AMSL

**Details of existing pits**

Pit No.	Broken Area in Ha	Surface RL in m.	Pit Bottom RL in m.	Benches in m.				
				Type	Bench No.	Av. Ht. in m.	Av. Width in m.	Overall Slope (in 0 <sup>0</sup> )
1	0.116	392	383	Waste / Mineral	1	9	18	80
2	2.212	397	373	Waste / Mineral	3	8	8	48
3	1.400	400	388	Waste / Mineral	3	4	10	48
4	0.042	400	394	Waste / Mineral	1	6	6	80
5	0.012	395	392	Waste / Mineral	1	3	4	80
6	1.480	392	378	Waste / Mineral	4	3	6	45
7	0.500	398	390	Waste / Mineral	2	4	20	20
Total	5.762							

**Mining Method**

- Existing mining is being carried out by the open cast manual method using hand tools such as spades, chisel, hammer etc. and very occasional deployment of heavy earth moving machineries for excavation, loading & transportation on single shift basis in the rock phosphate deposit at the pit no. 3.
- For capacity expansion, it is proposed to adopt other than fully mechanised mining using deep/small dia blast hole drill, JCB/pockland, dumpers and also using hand tools such as spades, hammers, crowbars, chisels etc.

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- Proposal for five years working has been envisaged at fresh land around present working pit no. 2 & 3/6 as well as in broken land of same pits because sufficient land for development / production will be needed to reach upto proposed depth with systematic benching
- Presently 5.762ha area has been excavated up to 373mRL and during the ensuing five year development, fresh area of 2.315ha will be developed around the pit no.2 & 3/6 and cumulative area around 8.077ha will be developed, Ground water seepage may encounter because the proposals of 5<sup>th</sup> year will be near to GWT hence in post monsoon season continuous dewatering will be done with one to two 10HP water pumps

Blasting Operation	Jackhammer drilling is done at the top capping Broad blasting & drilling parameters: Burden : 1.5m Spacing : 2.0-2.5m Depth of drill hole : 6.3m Diameter of blast holes : 33mm Charge per hole : 700gms Powder factor : 8.6mt + 1.3 cum per kg
explosive used	Blasting is proposed to done with special Gelatine, Ammonium Nitrate & detonating fuse.
Crusher	Crusher will be proposed. After crushing size of +12mm to 60mm is and -12mm is used as direct application.
Water Consumption (Avg.)	Dust Suppression 612 kl per day from mine pit water Domestic activity 6 8.0 kl per day from own dugwell & Handpump Green Belt - 5.0 kl per day from mine pit water Crusher - 10.0 kl per day from mine pit water
Waste Water Generation	Only from domestic section, taken care by Soakpit/septic tank arrangement

**Existing and proposed land use plan**

Items	Existing	end of lease period	end of mine life
Total lease area	48.758 ha		
Total Mineable area	17.278ha		
Ultimate depth of mining	11m (373AMSL)	12m (372AMSL)	14m (370AMSL)
Ultimate pit slope	20-80 degree	20-80 degree	45 degree
Area under dumps	6.940 ha	2.80 ha	5.90ha
Area under pits	5.762 ha	8.077 ha	17.278 ha
Overburden quantity	64373m <sup>3</sup>	189253m <sup>3</sup>	457632m <sup>3</sup>
Area to be reclaimed	Nil	Nil	Nil
Infrastructure & Road	1.1ha	1.1ha	1.1ha
Mineral storage	Nil	Nil	Nil
Water Body	2.0 ha	5.0 ha	17.278ha
Plantation	1.5ha	5.0ha	16.5 ha

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**Air pollution control measures**

Following measures has been observed which has been adopted to control the air pollution:

- Spraying of water has been observed on the haulage roads, services road & dump area. Frequency of the spraying over haulage road is required to increase, after capacity expansion.
- Dumps have been observed in scattered position in lease area. All the dumps are found inactive at this stage. Dump management used to be evaluated in accordance with proposal of capacity expansion
- Provision of dust mask has been observed.
- Presently 1.5ha area has been covered by afforestation and during the conceptual period which will be increased upto 16.5ha area.
- Further measures pertaining to control of air pollution shall be evaluated and will be detailed out in EIA report.

Operation or source	Control options
a) Mining Operations	
Drilling	Liquid injection (water or water plus a wetting agent).
Blasting	Control blasting
Loading	Water wetting
Hauling (emissions from roads)	Water wetting, Soil stabilization, Paving, Traffic control.
b) Plant operations	
Crushing	Wet-dust suppression systems. Capturing and venting emissions to a control device.
Screening	Same as for crushing
Conveying (transfer points)	Same as for crushing
c) Fugitive dust sources	
Stockpiling	Water spraying
Conveying	Covering. Wet dust-suppression
Windblown dust from stockpiles	Water wetting, Covering, Windbreaks.
Windblown dust from roads	Sweeping, water spraying

**Water pollution control measures**

- “ There is accumulation of storm water in the existing pit, which is being used for dust suppression, green belt and agricultural activity.
- “ A protective trench has been formed around the toe of OB dumps
- “ Garland drain along the waste dumps has been observed which is having length of 800 mt & depth of 0.1m.
- “ Settling pit and drains are being cleaned properly to prevent the siltation
- “ There is no surface stream in the core zone.
- “ Domestic waste water is being collected in Soak pit
- “ Presently pit no. 6 is converted as a settling pit and located at southern part of the area. Size of the settling pit is 1.480 ha x 10m and total storage capacity of pit is 148000kl.

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**Solid waste management**

- Mine waste will be generated in the form of Iron concretionary shale. Dumping will be done in northern and southern side of the lease area which is away from the advancing faces
- Existing 9 nos. of dumps are covering 6.9408 ha of area having height of 1.5 to 3 mt and containing 64373 cubic meter of mine waste.
- During the proposal period, all scattered waste dumps will be shifted and dumped at a single place in the western direction as PWD-1 and generation of proposed waste from pit no 2 will also be dumped over the PWD-1 as well as simultaneously generation of proposed waste from other pit no. 3 and 6 will be dumped as PWD-2 in eastern direction. The gentle slope of dumps will be kept less than 28 degree will be maintained.
- During the proposed five year and conceptual period, 34902cum and 288019 cum mine waste will be generated respectively, which will be dumped over PWD- 1 & 2 with avg. height of 10m.
- Backfilling will not be proposed till conceptual period. Dump area at the end of conceptual period will be covered about 5.90ha

Details of OB Generation	
Year	Quantity in m <sup>3</sup>
Till Date	64373
Upto 2017	189253
Upto mine life	457632

**Existing waste management**

Dump No.	Type Active / Inactive	Quantity m <sup>3</sup>	Base Area m <sup>2</sup>	Av. Height m.	Remark
WD-1	Inactive	13500	4500	3	Locations and dimension of scattered dumps are shown in present surface plan
WD-2	Inactive	375	250	1.50	
WD-3	Inactive	1650	1100	1.50	
WD-4	Inactive	3000	2000	1.50	
WD-5	Inactive	8400	5600	1.50	
WD-6	Inactive	4687	1875	2.50	
WD-7	Inactive	17850	5950	3.00	
WD-8	Inactive	1800	900	2.00	
WD-9	Inactive	1820	910	2.00	
Scattered	Inactive	11291	6323	1.50	
Total		64373	29408		

**Proposed waste management**

DUMP NO	Type Active/ Inactive	Quantity M3	Base area m2	(AV) Height m	Area stabilized m2
MW1 (WEST)	Inactive	121498	12645	10	Nil
MW2 (NE)	Inactive	121688	9700	11	Nil

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TOTAL		243186	22345	-	Nil
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**Noise pollution control measures**

**Following management practices have been observed for the present operation.**

- “ Wherever the noise levels exceed 85 dBA, workers have been provided with earmuffs, ear plugs etc.
- “ Hydraulic drills has been used for drilling;
- “ All moving parts of machine are properly lubricated;
- “ Non-moving parts of machine are properly fastened;
- “ A barrier of overburden at mine boundaries is being made and rows of trees are proposed to be planted to reduce propagation of noise;
- “ All the basic equipments and various machineries have been kept well maintained.
- “ Further measures and suggestion for solid waste management in consideration with capacity expansion shall be studied during EIA study

<b>Afforestation plan</b>										
<b>REQUIREMENTS OF PLANTS FOR AFFORESTATION/RECLAMATION</b>										
Year	Unworked area green belt		Bench slope		Inside Dumps		Top soil dumps		Total	
	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees	Area (Ha)	Trees
Present	1.5	1500	-	-	-	-	-	-	1.5	1500
<b>Up to 2017</b>	5.0	7225			-	-			5.0	7225
LP to CP	3.638	5460	1.362	2050	5.90	8850	-	-	10.9	16360
<b>Total</b>	10.138	14185	1.362	2050	5.90	8850	-	-	17.4	25085

After deliberations following additional TORsø have been prescribed for inclusion in the EIA report:

- Air quality modeling for point as well as line source to be depicted and presented considering the adjoining mines and the sensitive receptors.
- EMP based on above to be incorporated.
- Micro-level survey of the features existing within 2 Km radius around the project boundary to be depicted on the map and presented with the EIA.
- At least one AAQMS to be placed at the boundary towards the RF.
- Source of water / drinking water for the entire mine life to be detailed out,
- Deep-hole blasting is proposed in the project- impacts of the same to be studied and the mitigations to be proposed.
- Map depicting the locations of all the operational / exhausted / proposed mines in the region to be furnished and discussed.
- Top-soil Management Plan to be submitted.
- OB-management Plan with spatial depictions to be furnished.

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- Detailed scheme for plantation to be submitted with areas demarked on lay-out for greening.
- Activity-wise annual budget for executing the EMP has to be furnished.
- Details of Environmental cell to be deputed in the project with the responsibilities assigned to each of the members of the cell.
- Public Hearing has to be carried out disclosing all the facts on process, possible disasters with proposed mitigations, expected air/water pollution from the project and the mitigations proposed thereby. All details of the proposed land (present land-use, ownership status diversion (if any) permissions etc. have to be disclosed before the public.

**18. Case No. - 1857/2014 Dr. N.C. Mishra, M/s Ujala Merchants & Traders Ltd., Kohli Farm House Campus, Near Rapta Petrol Pump, Khirahni, Katni (MP)-483501 Gudha Dolomite Mine Lease Area –8.094 ha. Capacity:2,50,000 Tonnes /Year, at Khasra No. - 49P, 51,52P,53P, 73P, 81P, 82P, 83, 84P, 85 at Village-Gudha, Tehsil-Badwara, District-Katni (MP) , Capacity - Cu.mt/Year. Env. Consultant – Not Mentioned. For- ToR.**

This is a project pertaining to mining of Dolomite in MLA of 8.094 ha. The activity is mentioned at S.N. 1 (a) of the Schedule of EIA Notification 2006 as amended from time to time. The project does not attracted by the any of general conditions and falls under category -B-1ö by virtue of its location and mining lease area. Hence the project requires prior Environmental Clearance from the SEIAA. The case was forwarded by SEIAA to SEAC for scoping so as to determine TORsöto carry out EIA and prepare EMP for the project.

Project proponent and his consultant presented the salient features of the project, PFR, baseline data and the proposed TOR before the committee. The presentation and the submissions made by the PP reveals following:

It was submitted that this is an proposed mine . The proponent wish to production of 250000 Tonnes per annum. Accordingly the mine plan has been approved.

**Environment setting**

Village	Gudha
Tehsil	Badwara
District	Katni
State	MP
Latitude	23 <sup>0</sup> 40ö34.9öö 24 <sup>0</sup> 40ö49.9öö North
Longitude	80 <sup>0</sup> 32ö14.1öö 80 <sup>0</sup> 32ö31.3öö East
Co-Ordinate	1. 23 <sup>0</sup> 40ö 41.8ö- 80 <sup>0</sup> 32ö 14.2 ö 2. 23 <sup>0</sup> 40ö 43.3ö- 80 <sup>0</sup> 32ö28.5ö 3. 23 <sup>0</sup> 40ö 35.2ö- 80 <sup>0</sup> 32ö19.2ö 4. 23 <sup>0</sup> 40ö 38.8ö - 80 <sup>0</sup> 32ö 14.1ö
General Ground Level	458 M
Nearest Village	Gudha - 0.50km - W

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Mineable Area	7.5ha
Existing Pits & Quarries	0.305ha
Existing Dumps	0.20ha
Plantation	Nil
Recoverable / Mineable Reserve	3189303T
Method of mining	OTFM (A Category)
Ultimate Depth of Mining	39m (419mRL)
Ultimate Pit Slope	45°
Expected Life of Mines	16years
Lease Period	20 year upto 2019
Stripping Ratio	1 :0.35 to 1:0.69
Existing mode to transportation	Road
Area to be covered under dumps in conceptual period	1.0125ha
Area covered under pit in conceptual period	6.4365ha
Area to be reclaimed by conceptual period	1.50ha
Area to be covered under plantation by conceptual period	4.5ha
Area to be covered under water reservoir	3.8115 ha
Elevation	468-458mRL
Ground water table	
Monsoon period	45m bgl (413mRL)
Dry month	50m bgl (408mRL)

**Geology of the mine**

<b>Geological Characteristics of the applied Lease Area</b>
<b>Litho Sequence</b> Lateritic soil cover Dolomite & Phyllite Base unknown
Mineralized area : 75000 m <sup>2</sup>
OB : 0.0 to 3m - Lateritic soil cover and followed by weathered siliceous formation
Depth of mineralization : 33m below the OB
Strike : ENE-WSW to E-W and dipping 60 <sup>0</sup> -70 <sup>0</sup> towards the SE/NW.
Physical Characteristics : Color: Grayish white to white, form: massive, fine to medium grained, hardness: 5-6 Sp. Gravity : 2.65 t/cm for Dolomite

**Details of existing pits**

Pit No.	Size-M	Pit bottom mRL	Logging (Meters)
PIT 01	0.305ha	450	0.00-5-7M - Dolomite

**Mining Method**

- Opencast method of mining (A category other than fully mechanized mines) is proposed for the excavation of Dolomite.

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[Manohar K. Joshi, Member]

[A.A. Mishra, Secretary]

- All operations of mining will be done by adopting systematic benching system with use of heavy earth moving machinery for excavation, loading & transport. Drilling and Blasting will be done intermittently. Drill holes of 2.8m depth on a systematically designed pattern will be done for heaving/production.
- Haulage road will extended to every development/working bench and to the floor of the quarry.
- There will be two development benches of 3 meters each and 2-4 production benches for production of Dolomite.
- RL wise, the development benches will reach from 465m-451m and production benches will be from 463m to 431m. RL wise. The development and production benches will be formed between the Rls of 465m-431m.
- It is proposed to excavate 3.2772ha in next five years with average depth 38m depth or up to the RL of 430m.
- Ground water table in the area is very low. Seepage from ground water table may not encountered.

**Existing and proposed land use plan**

Items	Existing	Conceptual Period
Total lease area	8.094ha	
Ultimate depth of mining	8m below ground level	39m bgl
Ultimate pit slope	45 degree	45 degree
Area under dumps	0.2ha	1.0125ha
Area under pits	0.3050ha	6.4365ha
Area to be reclaimed	Nil	1.5ha
Infrastructure & Road	0.27ha	0.01ha
Mineral storage	Nil	Nil
Plantation	Nil	4.5ha
Water body	0.2ha	3.8115ha

**Air pollution control measures**

- Following measures at primary level is being suggested as below and comprehensive site specific control measure shall be detailed out during the EIA study :
- Spraying of water at haulage roads, services road & dump area.
- Spraying of water over the transportation road from lease area to nearest pakka road.
- Densification of vegetation over the old inactive dumps.
- Provision of dust mask for worker .
- Development of green belt over 4.5ha need to be undertaken with the commencement of operation of mine.
- Further measures pertaining to control of air pollution shall be evaluated and will be detailed out in EIA report.

**Water pollution control measures**

- “ There is no water course in the lease area. The main drainage of the area is through seasonal Nalla, which is observed in Eastern direction at a distance of about 150m. The water table is encountered from 45m to 50m from the surface level, whereas mining is proposed up to avg. 39m depth. Thus the ground water table will not be intersected during conceptual period.
- “ Following measures are suggested at primary stage :
- “ Garland drain around the waste dumps till its utilization for reclamation purposes
- “ Provision of retaining wall around the dumps to prevent silt flow towards nalla and nearby field.
- “ Drain along lowest contour level in NE direction is proposed to prevent silt flow.
- “ All the drains shall not be open ended and will be terminate in to the settling tanks. The size and number of settling tanks shall be decided during the EIA study.

[R.B. Lal, Chairman]

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[K.P. Nyati, Member]

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[Dr Krishnan Iyer, Member]

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[Dr. Manoj Pradhan]

[Manohar K. Joshi, Member]

[A.A. Mishra, Secretary]

- “ Rehabilitation is also proposed as water body to be developed in the lease area . Proper fencing and steps shall be planned. Utilization of water body for agriculture purposes or fisheries may be studied during the EIA study.
- “ Further measures pertaining to control of water pollution shall be evaluated and will be detailed out in EIA report.

**Solid waste management**

- It has been studied that during the life of mine total 6.4365ha areas will be excavated and 1.5ha area will be reclaimed by using mine waste & OB and rehabilitated through afforestation.
- Presently 0.20ha area are covered under inactive old dumps, which contains 7638m<sup>3</sup> weathered over burden material comprising rock fragments and soil. These four dumps are located in north, east and central part of lease area. These dumps will be re-handled for approach road maintenance.
- During the SOM period, 242563 m<sup>3</sup> mine waste will be generated and same will be dumped over the dump no. MW1 in northern part which will cover about 1.4ha area.
- Further measures and suggestion for solid waste management with a view to undertake capacity expansion shall be studied during EIA study.

**Noise pollution control measures**

**Following management practices have been observed for the present operation.**

- “ Use of hydraulic drills for drilling;
- “ Proper lubrication of all moving parts and fastening of Non-moving parts.
- “ Use of controlled blasting techniques with modern methods to avoid noise and vibration related problems.
- “ Development of green belt as barrier for propagation of noise to outside of lease area

<b>Afforestation plan</b>										
<b>REQUIREMENTS OF PLANTS FOR AFFORESTATION/RECLAMATION</b>										
<b>Year</b>	<b>Un-worked area green belt</b>		<b>Outside dumps (reclaim)</b>		<b>Bench of pit</b>		<b>Inside dump</b>		<b>Total</b>	
	<b>Area (Ha)</b>	<b>Trees</b>	<b>Area (Ha)</b>	<b>Trees</b>	<b>Area (Ha)</b>	<b>Trees</b>	<b>Area (Ha)</b>	<b>Trees</b>	<b>Area (Ha)</b>	<b>Trees</b>
Present	-	-	-	-	-	-	-	-	-	-
1 <sup>st</sup> to 5th	0.8625	1300	-	-	-	-	-	-	0.8625	1300
6 <sup>th</sup> to conceptual period	-	-	1.5	2250	1.125	1700	1.0125	1500	3.6375	5450
<b>Total</b>	<b>0.8625</b>	<b>1300</b>	<b>1.5</b>	<b>2250</b>	<b>1.125</b>	<b>1700</b>	<b>1.0125</b>	<b>1500</b>	<b>4.5</b>	<b>6750</b>

**Base line data**

It was reported by the PP that collection of baseline data of the region has already been started from 15<sup>th</sup> Sept., 14 (Post Monsoon)

After deliberations following additional TORs have been prescribed for inclusion in the EIA report:

- Air quality modeling for point as well as line source to be depicted and presented considering the adjoining mines and the sensitive receptors.
- EMP based on above to be incorporated.
- Micro-level survey of the features existing within 2 Km radius around the project boundary to be depicted on the map and presented with the EIA.
- At least one AAQMS to be placed at the boundary towards the RF.
- Source of water / drinking water for the entire mine life to be detailed out,

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[A.A. Mishra, Secretary]

- Map depicting the locations of all the operational / exhausted / proposed mines in the region to be furnished and discussed.
- Top-soil Management Plan to be submitted.
- OB-management Plan with spatial depictions to be furnished.
- Detailed scheme for plantation to be submitted with areas demarked on lay-out for greening.
- Activity-wise annual budget for executing the EMP has to be furnished.
- Details of Environmental cell to be deputed in the project with the responsibilities assigned to each of the members of the cell.
- Drainage pattern in the region with special reference to the nearby hillock to be studied so as to ensure that the lease area is not affected by the same.
- Baseline data collection is reported to be in progress the same can be used in the EIA report.
- Public Hearing has to be carried out disclosing all the facts on process, possible disasters with proposed mitigations, expected air/water pollution from the project and the mitigations proposed thereby. All details of the proposed land (present land-use, ownership status diversion (if any) permissions etc. have to be disclosed before the public.

Meeting ended with thanks to the Chair and the Members

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[R.B. Lal, Chairman]

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